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Arborist Report

218 McMurchy Avenue South, Brampton, Ontario, Canada

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Consulting Arborist - Tree Doctors Inc

July 3, 2024

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Summary:

This arborist report will detail the results of the inventory of the trees at **218 McMurphy Avenue South** and provide recommendations in support of the proposed development.

It is to be read in conjunction with the tree protection plan (TP1) issued by Tree Doctors Inc.

All bylaw protected trees on or within 6m of the proposal not requiring permits are to be protected to the full extent of their Tree Protection Zone (TPZ).

Ownership	Total Trees	Permits required	Replacements required
Private	3	3-Removals	9
Neighbouring	2	/	/
City	3	2-Injuries	/
RNFP	/	/	/

Total number of bylaw-protected trees inspected on the site:
8

Replacement Requirements:

Tree removal due to the proposed work shall be compensated in form of the number of replacement trees in the associated table.

Replacements are based on the municipal ratio system:

- 3:1 ratio for 3 trees in Good condition

Replacements	Total Trees
Planted on site	4
Cash in Lieu	5
Total Replacements	9

Section 1: Introduction

The professional services of Tree Doctors Inc. have been engaged to detail the condition of the trees at 218 McMurchy Avenue South regarding the proposed development of the subject property.

Brief summary of the proposed works:

- Splitting the lot in two and construction of proposed building with belonging driveway and porch.

Overall, all relevant bylaw-protected trees are on the property or within 6m of it were visually assessed by Tree Doctors, Inc and recorded in a tree inventory within this report. A site plan delineating the location of the trees and proposed tree protection zones in relation to the planned construction is provided, labelled SP1. The report should also be read in conjunction with any other relevant plans for the proposal if available, such as grading or landscaping plans.

Due to the potential for impact to the bylaw-protected tree protection zones (TPZs) of the trees, any necessary permit requirements are outlined within the report. The potential impact to the health of the trees from work within the TPZs are reviewed and assessed.

The latest site drawings and information from the client were used to locate trees. If surveyed locations for some trees were not provided, their approximate positions were determined with the help of field reference markers.

Recommendations as to the appropriate course of action are provided. These recommended actions take into account the tree condition such as tree structure, tree health, tree form, and any other relevant factors. Additionally, proposed site plans, environmental factors, and the desires of the property owner(s) were included in the considerations.

Any relevant specs to the proposed tree protection/mitigation work are included at the end of this report.

No endangered or otherwise provincially/federally protected tree species were observed within the limits of proposed works.

Section 2: Methodology

The most recent on-site inspection of 218 McMurchy Avenue South was made in the week of June 15th, 2024. Visual Tree Assessment (VTA) was undertaken on all bylaw protected trees located on the property and within six meters of the proposal or access routes. The method of tree evaluation is adapted from Matheny and Clark, 1994 and is recognized by The International Society of Arboriculture (ISA) and the American Society of Consulting Arborists (ASCA).

Conventional visual inspection arboricultural technique was used to evaluate the trees discussed in this report. This involved visually inspecting all above-ground accessible parts of the tree. During the examination, the arborist searches for various unorthodox features such as scars, defects, external signs of decay like fungal fruiting bodies, insect infestations, discolored foliage, condition of the visible root structures, degree and direction of lean (if applicable), the general health of the tree, the surroundings, and the proximity of buildings and people.

The diameter at breast height (DBH) was measured by a diameter tape at 1.4m above ground level. Several close-up and wide-angle pictures were taken and are displayed in Section 6. Higher resolution pictures can be obtained by emailing slitvinov@treedoctors.ca.

Tree inventory has been compiled based on the trees of size both on within and immediately adjacent to the subject property. Live trees have been assessed in terms of their general health from good to poor:

- Good – Trees in good overall health and condition with desirable structure,
- Fair – Trees in moderate health and condition with less desirable structure,
- Poor – Trees displaying prominent health issues such as decay and disease and/or poor form and structure,
- Dead – Trees 100% dead and not expected to serve a desirable environmental impact.
[Trees of this condition do not require municipal removal permits]

Ownership categories for bylaw protected trees inventoried by this report:

1. Private: Trees over the minimum bylaw diameter situated on the private property of the subject site.
2. Neighbouring: Trees over the minimum bylaw diameter situated on private property where the trunk overlaps the neighboring private property line at ground level or within 6m of the subject site.
3. Park: Trees of all diameters situated on city-owned parkland
4. Special Protected Areas: Trees of all diameters situated within specially designated areas such as RNFP, TRCA, CVC, etc. The type of protected area will be specified within the report.
5. City: Trees of all diameters situated within the City Road Allowance adjacent to the subject site.

Limitations:

The inspection was conducted at surface level. Certain tree health indicators which manifest in the upper crown and at the sub-surface level are not identifiable from this vantage point. It should be noted that the trees were not subjected to coring, probing, climbing, or detailed inspection of the root crowns, unless specifically mentioned otherwise.

The client or project contractor is responsible for ensuring that the suggestions in this report are implemented, as deemed appropriate by the municipal bylaw staff. It is the client's duty to execute the recommendations within the report. Tree Doctors, Inc. is not liable for ensuring that the recommendations outlined in this report are followed.

Section 3: Tree Protection

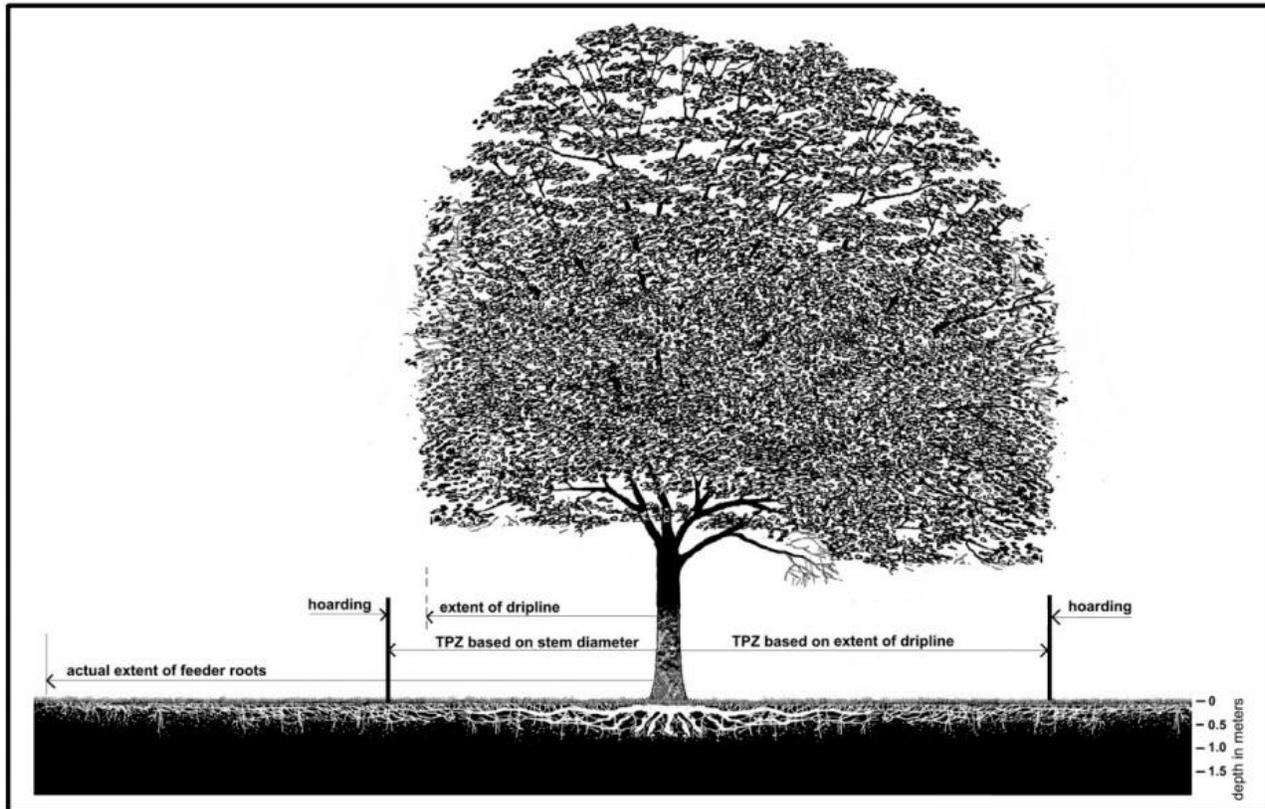
A tree protection zone (TPZ) must be established around each tree not slated for removal, extending in all directions from the base of the tree to a minimum distance of approximately six times the diameter of the tree. TPZs shall be a minimum of 1.2 metres (4 feet) high and consist of plywood or plastic web hoarding or equivalent (as approved by the city).

Trunk Diameter (DBH) ¹	Minimum Protection Distances Required ² City-owned and Private Trees	Minimum Protection Distances Required Trees in Areas Protected by the Ravine and Natural Feature Protection By-law
		Whichever of the two is greater:
<10cm	1.2 m	The drip line ⁴ or 1.2 m
10- 29 cm	1.8 m	The drip line or 3.6 m
30 ³ – 40 cm	2.4 m	The drip line or 4.8 m
41 – 50 cm	3.0 m	The drip line or 6.0 m
51 – 60 cm	3.6 m	The drip line or 7.2 m
61 – 70cm	4.2 m	The drip line or 8.4 m
71 – 80cm	4.8 m	The drip line or 9.6 m
81 – 90 cm	5.4 m	The drip line or 10.8 m
91 – 100 cm	6.0 m	The drip line or 12.0 m
>100 cm	6 cm protection for each 1 cm diameter	12cm protection for each 1 cm diameter or the drip line ⁵

Solid barriers such as ¾” plywood should be used for all private trees, with 8’ high fencing wherever possible. **Orange plastic web snow fencing on 2”x4” wooden top and bottom frames** is to be located only in the case of trees situated on the city road allowance to allow for sightlines for the city.

No t-bars are to be used to secure the TPZs as they could injure roots or interfere with underground utilities. TPZs must have the required signage (to be picked up at the city offices) must remain in place for the duration of any construction or demolition occurring on the property. Inside the TPZ no construction, access, storage or disposal of material of any kind, adding of fill, or excavation may occur.

Once all protection measures have been installed, Urban Forestry staff must be contacted to arrange for an inspection of the site and approval of the tree/site protection requirements. Photographs that clearly show the installed tree/site protection shall be provided for Urban Forestry review to expedite the review. The city is to be notified and provide approval in the case of any required alteration of the location or type of protection. Finally, **once all construction and demolition has been completed the city is to explicitly authorize the removal** of said protection measures.



Establishing a TPZ is necessary to prevent physical harm to the stem and branches of the tree which may otherwise be incurred due to proximity to construction or demolition activities. The TPZ will encompass the tree's critical root area, protecting the roots from being damaged during excavation and from soil compaction which may occur due to the presence of heavy machinery.

Ravine/TRCA specific requirements

Where the worksite is up-slope from a ravine or a provincially protected natural feature areas, sediment control fence is to be used. The 4 ft. high sediment control fence would be installed between the worksite and protected area down-slope. The sediment control fencing must be installed to Ontario Provincial Standards (OPSD-219.130) or an alternative pre-emptively

approved by the governing body. An approximate ravine or TRCA governing line has been provided based on available city maps, but an exact guideline is recommended to be obtained from the Brampton Map Service Counter at 416-392-2506.

Removals

It is recommended that any vegetation removal be conducted outside of the sensitive breeding bird season (May 1st to July 31st) in order to mitigate any impacts to breeding birds.

Root trimming/Work within the TPZ

If any tree roots are uncovered within the TPZ the supervising arborist is to prune them back to the extent of the excavation using appropriate arboricultural methods. If roots over 1" are uncovered outside of the TPZ, excavation should immediately cease and an arborist used to trim the root in such a manner as to mitigate damage to the tree.

At risk Species

No regionally rare tree species or endangered species that qualify for protection under the provinces Species at Risk Act were found.

Contraventions of the protection

If the project is found to be in contravention of the tree protection outlined in this report or tree protection guidelines set out by the municipality inspection fees of per tree per inspection may be charged to the owner by the city.

Overall post-construction impact

A visit by a professional arborist will be required at the completion of construction to ensure that proper protection has been provided and that no trees suffered unforeseen damage.

Section 4: Data

TREE #	Species	Botanical Name	DBH (cm)	Condition Rating	Ownership Category	Comments	TPZ (m)	Direction	Permit Requirement
1	Honey Locust	Gleditsia triacanthos	52	Good	Neighbour	Tree has good health and structure, no visible defects	3.6	Protect	No
2	Eastern White Cedar	Thuja occidentalis	22, 21	Good	Private	Codominant stems, pruning wounds, minor dead branches	undersized	/	No
3	Sugar Maple	Acer saccharum	39	Fair	City	Moderate dieback, dead branches ~10%, declining health	2.4	Injury	Yes
4	Red Maple	Acer rubrum	42	Good	City	Tree has good health and structure, minor dead branches	3	Injury	Yes
5	Norway Maple	Acer platanoides	50	Good	City	Tree has good health and structure, minor dead branches	3	Retain	No
6	Blue Spruce	Picea pungens	42	Good	Private	Pruning wounds, good health and structure	N/A	Remove	Yes
7	Eastern White Cedar	Thuja occidentalis	30,16	Good	Private	Codominant stems, pruning wounds, minor dead branches	N/A	Remove	Yes
8	Cedar Hedge	Thuja occidentalis	5-15 cm	Good	Private	Cedar hedge (5-15 cm diameter) having good health and structure	undersized	/	No
9	Pear Tree	Pyrus species	27, 15	Fair	Private	Codominant stems, minor dead branches, good health	N/A	Remove	Yes
10	Blue spruce	Picea pungens	46	Good	Neighbour	Tree has good health and structure, minor dead branches	3	Protect	No

Section 5: Conclusion

It is my recommendation that 3 trees at 218 McMurchy Avenue South be removed and 2 additional be injured in order to allow for proposed construction. The rest of the bylaw protected trees are to be protected by fencing to the extent of their TPZs, as outlined in the site plan.

No other municipally owned trees of any size, private trees, or neighbouring trees with diameters at breast height greater than 30 centimeters are located within the vicinity of the planned construction.

Tree #	Source of impact	Direction
3, 4	Driveway construction	Injury
6, 7, 9	Construction of the building with garage	Removals

Injuries

TREE #	Species	DBH (cm)	Condition Rating	Ownership Category	Comments	TPZ (m)	Direction	Permit Requirement
3	Sugar Maple	39	Fair	City	Moderate dieback, dead branches ~10%, declining health	2.4	Injury	Yes
<p>The tree in question will require minor to moderate TPZ trespass and minor root injuries in order to allow for proposed construction of the driveway. Footprints of the driveway are located approximately 1.9m away from the trunk of the tree at the closest point, necessitating 0.5m encroachment on its 2.4m TPZ.</p>					Injury source	Closest point of impact	Max depth	Impact to condition
					Driveway construction	1.9m	6"	Minor

The driveway will be constructed as a non-permeable surface and will require 6 inches deep excavation to allow for 3inch deep base of the driveway and 3 inches thick asphalt layer. Excavation deeper than 6 inches is not allowed.

Footprints of the proposed driveway overlap with TPZ area of the tree in less than 5%, and at the 1.9m distance it is likely that only minor amount of small diameter roots will be discovered at the depth of 6”.

Finding larger roots is not very likely, however if such roots are discovered, they should be retained. Removal of roots larger than 5cm in diameter is forbidden, and if such root is uncovered, the envelope should be immediately back filled, and the footprints of the driveway reduced. Finding and pruning of minor to moderate amount of small diameter roots is expected to have no effect on the structural integrity of the tree and its botanical condition.

The tree will remain safe for retention and its long-term survival is not likely to be compromised by proposed work.

TREE #	Species	DBH (cm)	Condition Rating	Ownership Category	Comments	TPZ (m)	Direction	Permit Requirement
4	Red Maple	42	Good	City	Tree has good health and structure, minor dead branches	3	Injury	Yes
					Injury source	Closest point of impact	Max depth	Impact to condition
					Driveway construction	1.9m	6”	Minor

The tree in question will require minor to moderate TPZ trespass and minor root injuries in order to allow for proposed construction of the driveway. Footprints of the driveway are located approximately 1.9m away from the trunk of the tree at the closest point, necessitating 1.1m encroachment on its 3m TPZ.

The driveway will be constructed as a non-permeable surface and will require 6 inches deep excavation to allow for 3inch deep base of the driveway and 3 inches thick asphalt layer. Excavation deeper than 6 inches is not allowed.

Footprints of the proposed driveway overlap with TPZ area of the tree in less than 10%, and at the 1.9m distance it is likely that only minor amount of small diameter roots will be discovered at the depth of 6”.

Finding larger roots is not very likely, however if such roots are discovered, they should be retained. Removal of roots larger than 5cm in diameter is forbidden, and if such root is uncovered, the envelope should be immediately back filled, and the footprints of the driveway reduced. Finding and pruning of minor to moderate amount of small diameter roots is expected to have no effect on the structural integrity of the tree and its botanical condition.

The tree will remain safe for retention and its long-term survival is not likely to be compromised by proposed work.

Excavation should not be deeper than absolutely necessary. All excavation within the TPZ should be done by hand and supervised by certified arborist.

Root sensitive excavation reduces root injuries to trees and involves trenching along the line of proposed excavation to the depth required for the proposed hardscaping, utility or site feature being installed, prior to mechanical excavation of the rest of the area. Location and Dimensions of proposed root sensitive excavation are to be provided to Urban Forestry in advance for their review.

All Root sensitive excavation must be performed under the supervision of a qualified arborist. All roots exposed must be documented by the supervising arborist. Every effort should be made to preserve as many exposed roots as possible. Roots approved for pruning should be cleanly cut with a sharp, non-vibrating tool at face of trench such that no further disturbance of the roots are to be expected once mechanical excavation begins. All root pruning is to be performed by the arborist only, as per guidelines below.

When Root sensitive excavation is performed in regards to the installation of site features such as driveways, walkways, curbs, etc. roots of less than 5cm diameter can be cut sharply, if necessary, unless an abundance of smaller roots are involved. If roots of 5cm diameter or greater or an abundance of smaller roots are exposed in the excavation areas inside or just outside the TPZ of bylaw trees they should be preserved and Urban Forestry must be notified to discuss the expected impacts of pruning such significant roots on the tree's health or stability, or to arrange the proposed site feature to be moved farther away from the tree and its significant roots.

Removals

TREE #	Species	DBH (cm)	Condition Rating	Ownership Category	Comments	TPZ (m)	Direction	Permit Requirement
6	Blue Spruce	42	Good	Private	Pruning wounds, good health and structure	N/A	Remove	Yes

The tree in question will require removal in order to allow for construction of the proposed two-storey dwelling. It is located directly adjacent (less than 1.5m away) to the footprints of the proposed house and will require total root loss of over 50% of its TPZ. The tree is not likely to survive such injuries, nor to retain its structural integrity, and should therefore be removed.

TREE #	Species	DBH (cm)	Condition Rating	Ownership Category	Comments	TPZ (m)	Direction	Permit Requirement
7	Eastern White Cedar	30,16	Good	Private	Codominant stems, pruning wounds, minor dead branches	N/A	Remove	Yes

The tree in question will require removal in order to allow for construction of the proposed garage within the building. It is located directly within the footprints of the proposed garage and is obstructing the space that will require over 3' deep foundation excavation. Due to its location retention is not possible and pre-emptive removal is recommended.

TREE #	Species	DBH (cm)	Condition Rating	Ownership Category	Comments	TPZ (m)	Direction	Permit Requirement
9	Pear Tree	27, 15	Fair	Private	Codominant stems, minor dead branches, good health	N/A	Remove	Yes

The tree in question will require removal in order to allow for construction of the proposed dwelling. It is located directly within the footprints of the proposed house and is obstructing the space that will require 6' deep foundation excavation. Due to its location retention is not possible and pre-emptive removal is recommended.

The tree(s) marked with Permit:Yes on the table in section 4 do not qualify for an exemption from the standard tree permit requirements, necessitating an Application to Injure or Destroy Trees.

A fee of \$395.53 per Private or City tree and \$828.04 per Neighbouring tree will be paid to the city via a certified cheque made out to "The Treasurer of the City of Brampton" or credit card paid over a scheduled phone call based on an email application. Tree guarantee deposits may be required in the case of City tree injury based on city tree valuation.

The owners will be obligated to plant at least three replacement trees (60mm+ caliper, nursery grown stock) per existing tree removed for construction purposes, in accordance with City of Brampton requirements. The number and types of replacement trees necessary are detailed in addendum 0.

Heavy machinery should be operated at the maximum distance from the trees consistent with the timely completion of construction. The driveway is to be used for material storage, unless otherwise specified in the plan TP1. No trimming of crowns of bylaw protected trees is necessary for the work.

Addendum 0: Replanting Plan

Following the removal of the trees (present location marked on the site plan), replacement trees will be planted in the back yard of 218 McMurchy Avenue South (planned location marked with green R# labels on the site plan).

As per Municipal guidelines, the trees must be over the minimum mandated size (Deciduous trees 50mm+ caliper, nursery grown stock OR Coniferous trees 1.75-2.5m height, nursery grown stock). The species of the replacement trees are to be selected from amongst the long-lived deciduous or coniferous tree species indigenous to the Southern Ontario.

Tree Replanting (Corresponds to R# on the TPP)	Replanting Species
Tree Replanting 1	<i>Acer rubrum</i>
Tree Replanting 2	<i>Aesculus glabra</i>
Tree Replanting 3	<i>Liriodendron tulipifera</i>
Tree Replanting 4	<i>Quercus alba</i>

New trees are recommended to be located no closer than 5-7m apart from other trees, 1.5m from property lines, 2m from hard surfacing such as deck/paving, 4m from foundations, and sufficiently removed from any other site features to allow for proper space to grow to full maturity.

5 mandated replacements not fitting appropriately on the property are to be paid as cash in lieu payments.

The following planting season (Spring/Fall) is the recommended time for replanting by a team of professionals. Planting to be completed in accordance with the Brampton planting manual PD-101.

Serg V. Litvinov



Section 6: Photo Documentation

Trees 1 and 2:



Tree 3:



Trees 4 and 5:



Tree 6:



Tree 7:



Tree 8:



Tree 9:

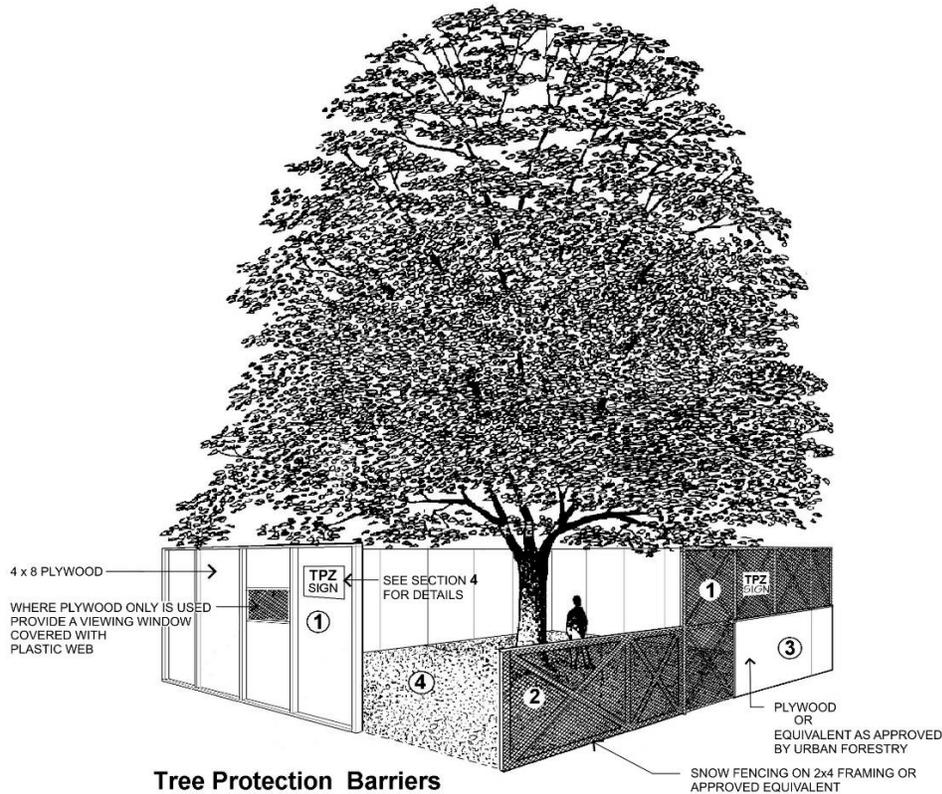


Tree 10:



Section 7: Specs and Addendums:

Addendum 1: Protection Barrier detailing



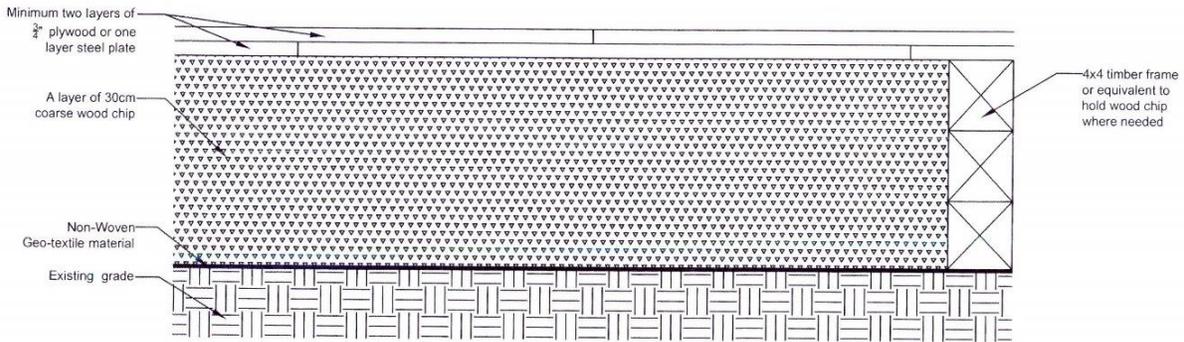
Tree Protection Barriers

- ① Tree protection barriers must be constructed with a solid wood frame clad with plywood or approved equivalent. Height of hoarding may be less than 8 ft. to accommodate any branches that may be lower.
- ② Tree protection barriers for trees situated on the City road allowance where visibility must be maintained can be 1.2m (4ft.) high and consist of orange plastic web snow fencing on a wood frame made of 2 x 4s.
- ③ Where some excavate or fill has to be temporarily located near a tree protection barrier, plywood must be used to ensure no material enters the Tree Protection Zone.
- ④ No construction activity, grade changes, surface treatment or excavations of any kind is permitted within the Tree Protection Zone.

Note:

Sediment control fencing shall be installed in locations indicated in an Urban Forestry approved Tree Protection Plan. The sediment control fencing must be installed to Ontario Provincial Standards (OPSD-219.130) heavy duty silt fence barrier and to the satisfaction of Urban Forestry. See Detail TP- 2

Addendum 2: Horizontal protection detail



Horizontal Tree Protection (Wood Chip)



Urban Forestry Services

Parks and Recreation Division

December 2013

Detail HTP - 1

Addendum 3: Example tree protection signage



Parks, Forestry & Recreation

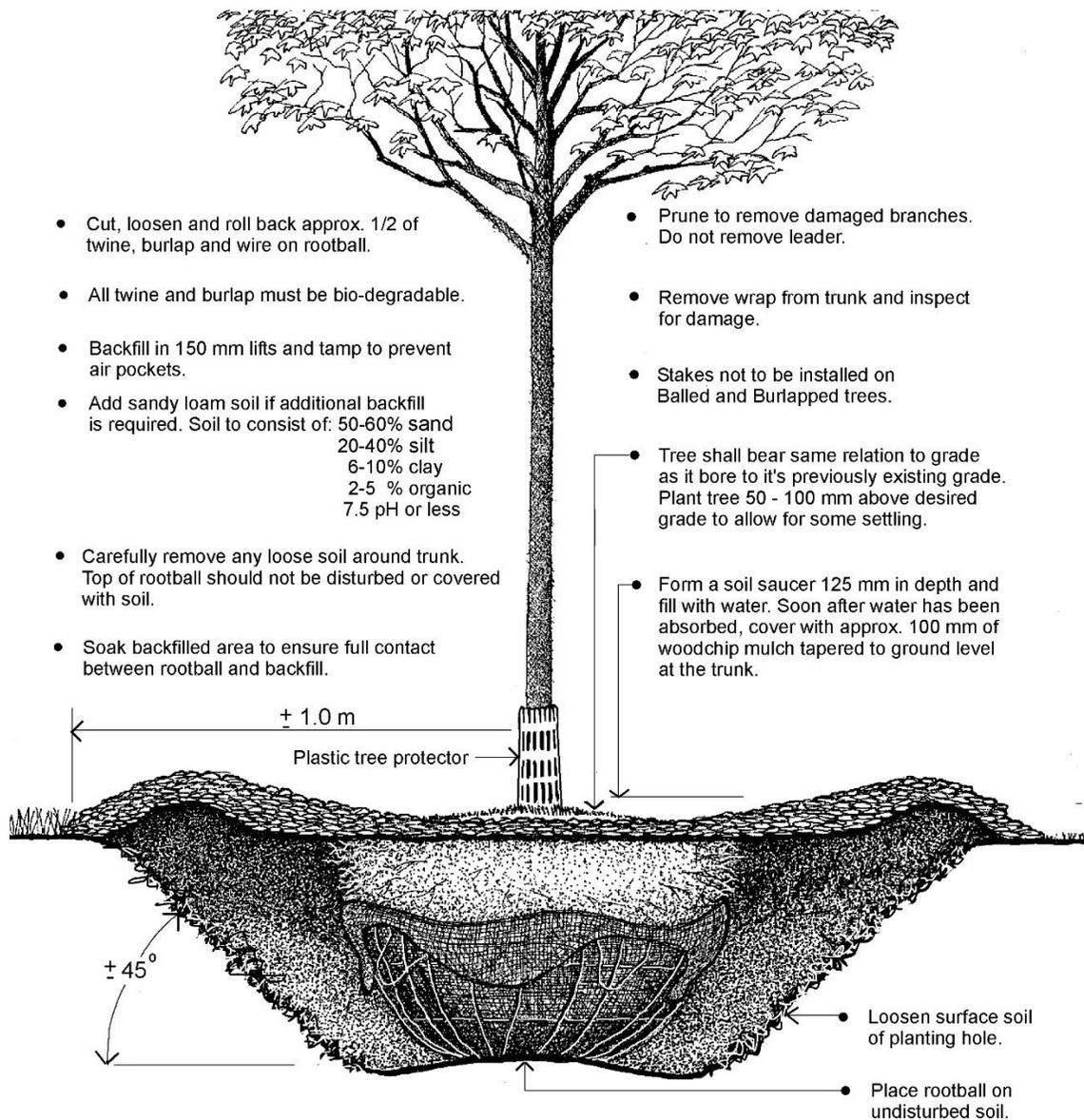
Tree Protection Zone (TPZ)

All construction related activities, including grade alteration, excavation, soil compaction, any materials or equipment storage, disposal of liquid and vehicular traffic are NOT permitted within this TPZ.

This tree protection barrier must remain in good condition and must not be removed or altered without authorization of City of Toronto, Urban Forestry.

**Concerns or inquiries regarding this TPZ can be directed to:
311 or 311@toronto.ca**

Addendum 4: Planting detail for Balled and Burlapped Trees in Turf



Planting Detail for Balled and Burlapped Trees in Turf



Urban Forestry Services

Parks and Recreation Division

June 2002

Detail PD -101